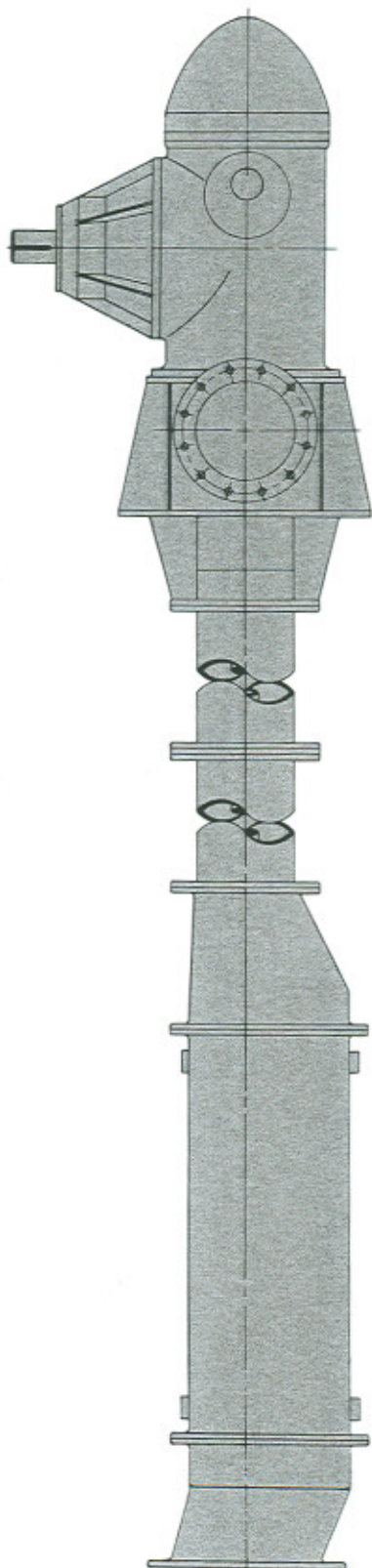


# WARREN 2201 SERIES



SECTION 2201  
PAGE 2201.1  
ISSUE D

## J-70 WET PIT & DRY PIT SCREW- TYPE BARGE PUMPS

Capacities - to 3000 GPM  
(4300 BPH)

Discharge Pressure - 125 PSIG

Viscosities - 35 to 4000 SSU

Pumping Versatility -

Pumps gasoline, kerosene  
No. 2 through No. 6 fuel oil  
asphalt, bottoms, water, etc.

Barges, tankers, in-ground  
storage tanks

Imo Industries Inc.

Warren Pumps Inc.  
Bridges Avenue  
Warren, MA 01083-0969  
413-436-7711  
FAX: 413-436-5605  
Telex: 955456

**IMO**



## FEATURES

- Excellent NPSH characteristics
- Mechanical seals not required
- Shorter bearing span
- Less bulk
- One design suitable for lubricating and/or non-lubricating liquids
- Hydraulically balanced
- Ideal for tank stripping applications

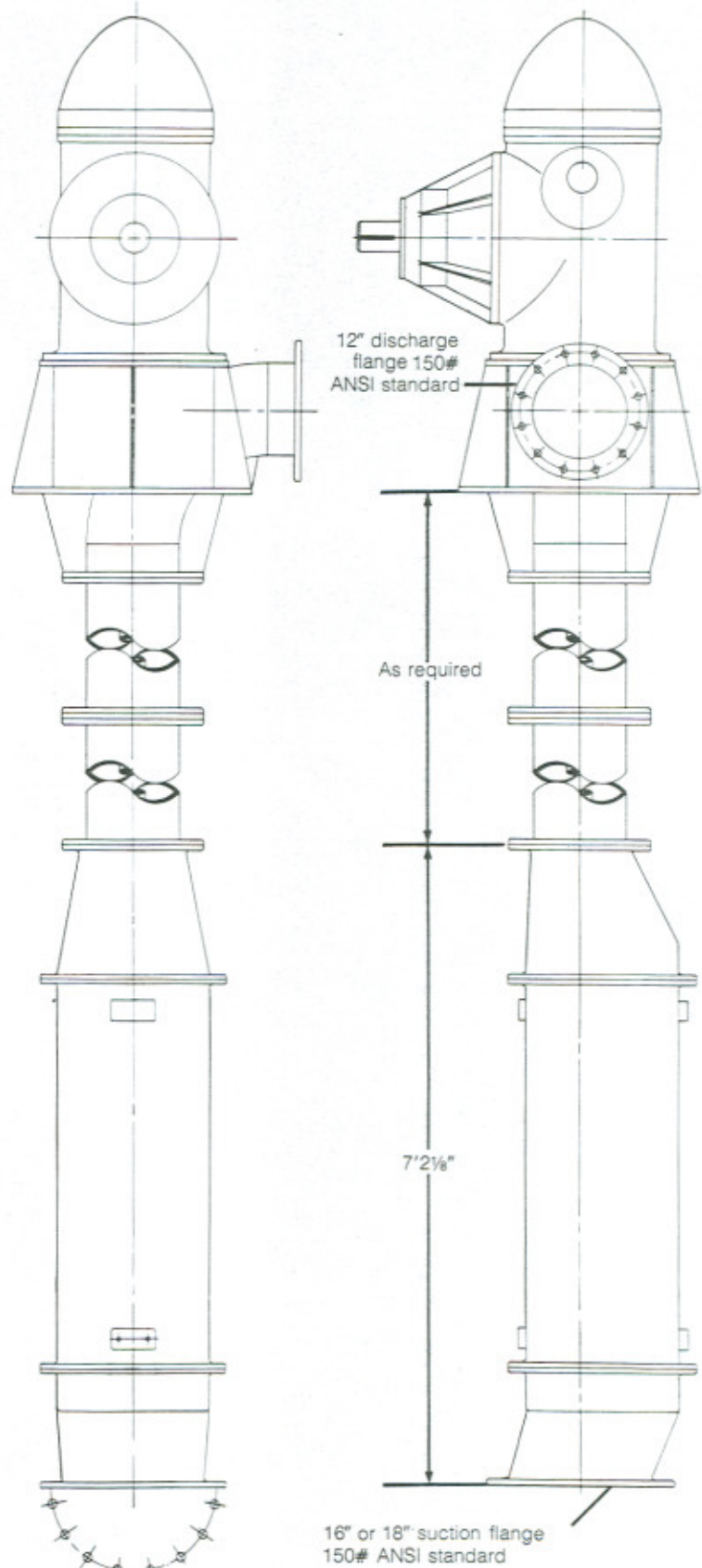
**General** — The Warren barge pump is a positive displacement screw pump featuring a fourscrew design for excellent suction-lift capability. A major feature of this design is its extremely low maintenance requirements. Special bearing construction provides wide liquid handling capabilities. Pump fits standard barge dimensions. Overall length of pumps can be tailored to a particular barge depth. Design handles both light oil and heavy oil barge requirements ... pumps light hydrocarbons as well as viscous asphalts. Pump is designed for easy removal by lifting at deck-mounted carrying plate. Can be driven by diesel engine through standard right-angle, deck-mounted gear reducers or by direct drive electric motor. Pump weight, including carrying plate, is approximately 3900 pounds.

### Positive Displacement (Four Screw Pump)

Each of two sets of opposed screws conveys liquid to provide hydraulic balance regardless of discharge pressure... ideal for tank stripping. This positive displacement screw pump is self-priming over a wide range of viscosities. Inherent in its design is its high pressure capability, high volumetric efficiency, constant pulse-free flow and low internal velocity... under varying viscosity and suction/ discharge pressure conditions.

**Dry Pit Design** — The addition of a simple elbow converts the standard Warren barge pump from wet pit to dry pit, bolted-in applications. The pump's excellent suction-lift capability allows it to handle a wide variety of liquids ... through the suction headers on multi-compartmented barges.

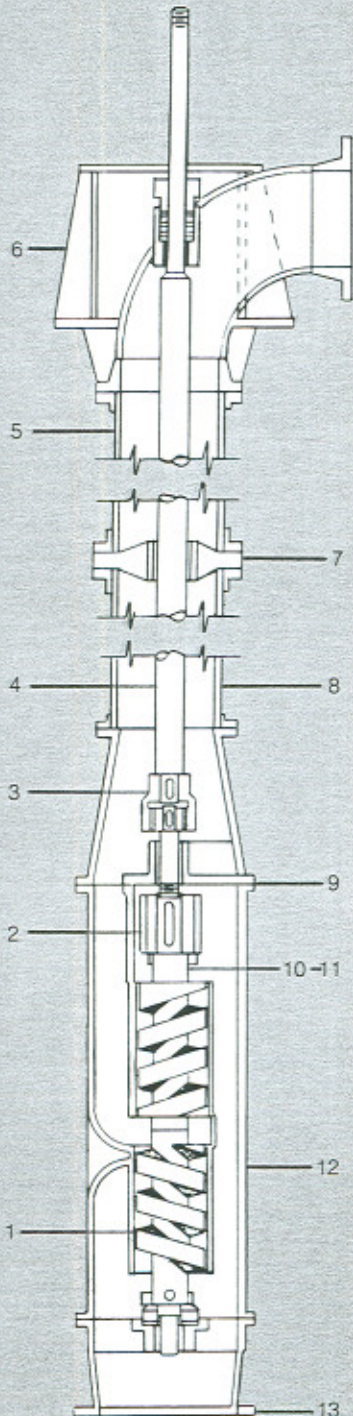
## J-70 BARGE PUMP





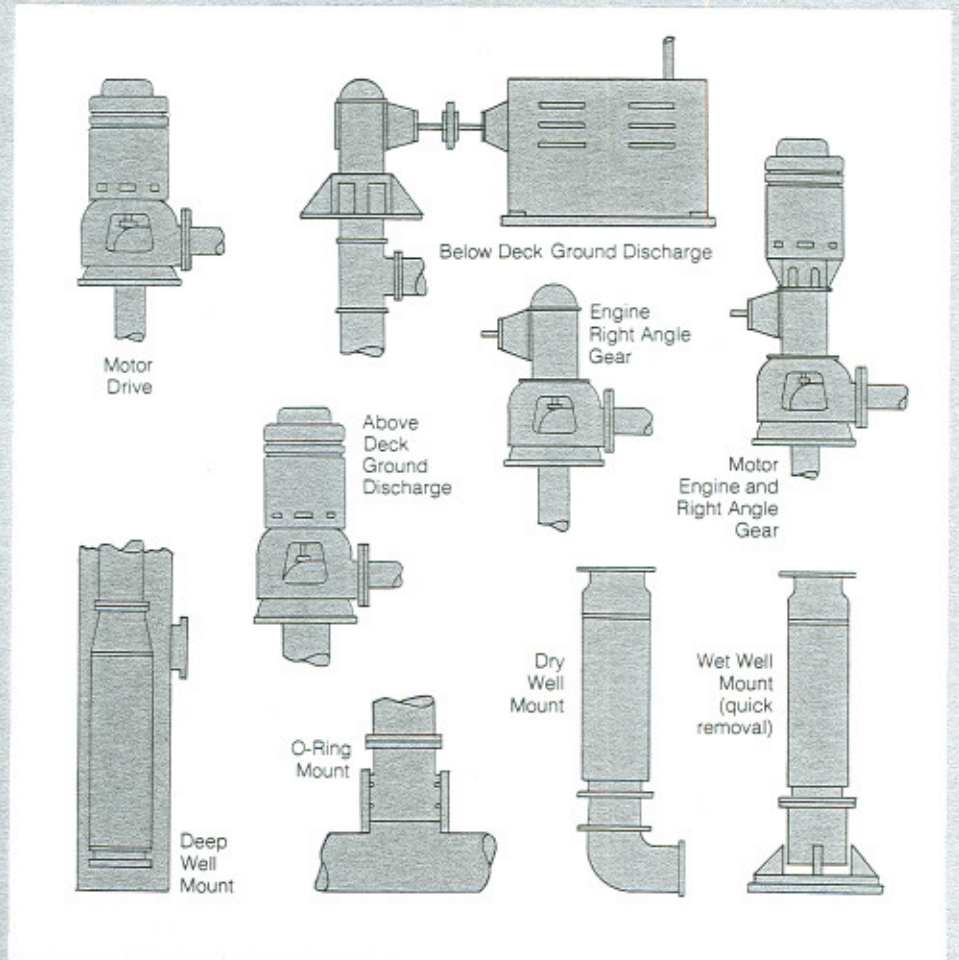
## PARTS AND STANDARD MATERIAL LIST

	PART	MATERIAL
1	Screws	Cast iron
2	Timing Gear	416 st. steel
3	Coupling (Driver half)	416 st. steel
4	Jackshaft, lower	Steel
5	Standpipe	Steel
6	Carrying plate	Steel
7	Intermediate bearing housing	Steel
8	Standpipe	Steel
9	Bearing housing	Cast iron
10	Long shaft	4140 steel
11	Short shaft	4140 steel
12	Body	Cast iron
13	Bearing housing	Structural steel plate



## VERSATILE MOUNTING AND PIPING

For Barge, Tanker and In-Ground Tanks





## APPROXIMATE SELECTION TABLES

SPEED 1160 R.P.M. DISPLACEMENT 2994 GPM							
VISCOSITY SSU	PRESSURE — PSI						
	25	50	75	100	125	150	
G.P.M.	35	2906	2918	2731	2644	2556	2469
	60	2926	2858	2790	2722	2654	2586
	100	2940	2887	2833	2780	2727	2673
	150	2949	2905	2861	2817	2773	2728
	200	2956	2917	2878	2840	2802	2763
	300	2962	2930	2898	2866	2832	2802
	500	2969	2944	2919	2894	2868	2843
	750	2973	2952	2931	2911	2892	2869
	1000	2976	2958	2939	2921	2903	2885
	4000	2484	2975	2965	2956	2946	2937
B.H.P.	200	79.4	123.2	166.9	210.7	254.4	298.2
	500	94.4	138.2	181.9	225.7	269.4	313.2
	1000	110.5	154.3	198.0	241.8	285.5	329.3
	2000	131.1	174.9	218.6	262.4	306.1	349.9
	5000	168.2	212.0	255.7	299.5	343.2	387.0
	7000	186.3	230.1	273.8	317.6	361.3	465.1
	10000	206.4	250.2	293.4	337.7	381.4	425.2
	HYD. H.P.	43.7	87.3	131.0	174.7	218.3	262.0

SPEED 880 R.P.M. DISPLACEMENT 2271 GPM							
VISCOSITY SSU	PRESSURE — PSI						
	25	50	75	100	125	150	
G.P.M.	35	2183	2095	2008	1921	1833	1746
	60	2203	2135	2067	1999	1931	1863
	100	2217	2164	2110	2057	2004	1950
	150	2226	2182	2138	2094	2050	2005
	200	2232	2194	2155	2117	2079	2040
	300	2239	2207	2175	2143	2111	2079
	500	2246	2221	2196	2171	2145	2120
	750	2250	2229	2208	2188	2167	2146
	1000	2253	2235	2216	2198	2180	2162
	4000	2261	2252	2242	2233	2223	2214
B.H.P.	200	57.0	90.0	123.4	156.6	189.7	222.9
	500	66.9	99.9	133.3	166.5	199.6	232.9
	1000	77.8	110.8	144.2	177.4	210.5	243.7
	2000	91.6	124.6	158.0	191.2	224.3	257.5
	5000	116.4	149.4	182.8	216.0	249.1	282.3
	7000	128.6	161.6	195.0	228.2	261.3	294.5
	10000	142.0	175.0	208.4	241.6	274.7	307.9
	HYD. H.P.	33.1	66.2	99.4	132.5	162.6	198.7

SPEED 690 R.P.M. DISPLACEMENT 1781 GPM							
VISCOSITY SSU	PRESSURE — PSI						
	25	50	75	100	125	150	
G.P.M.	35	1693	1605	1518	1431	1343	1256
	60	1713	1645	1577	1509	1441	1373
	100	1727	1674	1620	1567	1514	1460
	150	1736	1692	1648	1604	1560	1515
	200	1742	1704	1665	1627	1589	1550
	300	1749	1717	1685	1653	1621	1589
	500	1756	1731	1706	1681	1655	1630
	750	1760	1739	1718	1698	1677	1656
	1000	1763	1745	1726	1708	1690	1672
	4000	1771	1762	1752	1743	1733	1724
B.H.P.	200	42.6	68.6	94.6	120.6	146.7	172.7
	500	49.6	75.6	101.6	127.5	153.7	179.7
	1000	56.9	82.9	108.9	134.8	161.0	187.0
	2000	66.6	92.6	118.6	144.5	170.7	196.7
	5000	83.9	109.9	135.9	161.8	188.0	214.9
	7000	92.3	118.3	144.3	170.2	196.4	222.4
	10000	101.6	127.6	153.6	179.5	205.7	231.7
	HYD. H.P.	26.0	52.0	77.9	103.9	129.9	155.9

Please consult  
Warren for  
selections  
not shown  
by these  
tables.

One of two  
Warren J-70B  
barge-type  
pumps being  
installed at a  
large public  
utility. Each  
unloads 2900  
gpm of #6 fuel  
oil at 160 psig  
(maximum)  
discharge  
pressure from  
large  
underground  
storage tanks.

